

# **Blackfoot Trumpeter Swan Program Implementation & Evaluation Plan**

## **2009 Annual Report Pacific and Central Flyway Technical Committees and Councils & Greater Yellowstone Trumpeter Swan Working Group**

**Prepared by  
U.S. Fish and Wildlife Service,  
Montana Fish, Wildlife and Parks  
& Wyoming Wetlands Society**

### **BACKGROUND**

In 2004, the U.S. Fish and Wildlife Service, Montana Fish, Wildlife & Parks and the University of Montana completed a Trumpeter Swan Habitat Suitability Study for the Blackfoot Watershed. The study assessed over 400 wetlands and determined that nine wetland sites were suitable for release of trumpeter swans and 29 were deemed to be suitable as nesting territories.

In 2005, the U.S. Fish and Wildlife Service and Montana Fish, Wildlife and Parks, working with a committee of interested organizations and individuals, drafted an implementation and evaluation plan to guide restoration efforts for trumpeter swans in the Blackfoot Valley of Montana. Specifically, the goal of the restoration as stated in the plan is:

*“...to release trumpeter swans in the Blackfoot until such time as seven breeding pairs are established or until this evaluation suggests that the project should be terminated. (Established pairs are considered to be those that have fledged young at least twice from nests in the Blackfoot). Based on a 2004 habitat assessment in the Blackfoot, the maximum number of*

*swans resulting from this reintroduction could approach 20 to 30 pairs, through pioneering and natural expansion of the flock. It is the intention of this restoration effort that this breeding flock be migratory, leaving the Blackfoot Valley in winter. This program has been approved by the Pacific Flyway Council and will be implemented in accordance with the Pacific Flyway Plan for the Rocky Mountain Population of Trumpeter Swans and the associated Trumpeter Swan Implementation Plan.”*

Reintroduction of trumpeter swans in the Blackfoot Valley began in 2005 with the release of 10 birds. Since 2005, 112 trumpeter swans have been released in the Blackfoot Watershed. Releases have occurred on five different wetlands all of which were identified in the Habitat Suitability Study. All birds are marked with USGS aluminum leg bands and a red plastic leg band with white number/letter/number sequence (i.e. 3P1). All one-year-plus birds are also fitted with red and white neck collars bearing codes that match the red plastic leg bands.

Movements and observations have been recorded by U.S. Fish and Wildlife Service and MT Fish, Wildlife & Parks personnel, Wyoming Wetlands Society, local ranchers, and bird observers (128 individuals) reporting 588 observations of the release birds since releases began in 2005. Their movements can be seen on the Adopt A Swan Website at [www.blackfootchallenge.org](http://www.blackfootchallenge.org). Detailed information and reports are available from the U.S. Fish and Wildlife Service by contacting Greg Neudecker, Wildlife Biologist, Montana Partners for Fish and Wildlife Program, P.O. Box 66, Ovando, MT 59854, (406) 793-7400, [greg\\_neudecker@fws.gov](mailto:greg_neudecker@fws.gov)

## **2009 SUMMARY:**

**Summary:** From 2005-2009, 112 trumpeter swans were released in the Blackfoot Valley. Thirty (27%) of these birds are known to be dead. Ten appear to have died from severe intestinal parasitism and emaciation; six from power line strikes (five of those outside

the Blackfoot Valley); three from legal hunting, two were illegally shot; fifteen due to unknown reasons; and four were killed by predators. Thirty-eight (34%) birds have been seen within the last year and are believed to be alive at the time of this report. Forty (36%) of the release birds are missing from our observations over the last year, their status unknown.

Re-observations of the Blackfoot Valley release birds indicate a strong tendency to migrate out of the Valley during winter. Release birds are tending to move into the Snake River Valley in Idaho, Bear River in Idaho or the Ruby River in Montana by late November to early December. Re-observations also indicate a tendency for the Blackfoot trumpeters to migrate through low mountain passages, for example, possibly following Interstate 15 into southeast Idaho. Winter feeding and loafing areas are generally along the Snake, Bear Rivers and Ruby River but also on instream reservoirs (Oneida & American Falls). There have even been some re-observations of Blackfoot trumpeters feeding in stubble fields during the day particularly around American Falls Reservoir.

Of the 112 birds released prior to 2010 that were alive at the time of fall migration out of the Blackfoot, eleven were documented wintering in southeast Idaho around American Falls and Oneida Reservoirs, ten along the Ruby River near Sheridan, MT and four birds have been reported around Dillon, MT but no wintering has been confirmed but suspected. Two Blackfoot Birds were documented wintering at American Falls Reservoir one year and on the Upper Snake River – (Harriman Park Area) the second. No birds have been documented wintering in the Blackfoot Valley since the releases began in 2005.

Twenty birds have been observed in years subsequent to their release in the Blackfoot Valley. Two returned in 2006, 2 – 2007, 4-2008 and 12 in 2009. One of the birds in 2009 was a return bird

from 2008, 3P6. In general, birds are returning to the Blackfoot about the same time as wild birds are migrating through (late March to early May), dates varying due to dates of snow runoff, ice melting off valley wetlands, and spring weather conditions.

Two territories were established in 2009, one on Bandy Reservoir and one on Colburn Lake. No documentation of nesting attempts have been made in the Valley from released birds through 2009.

Five birds were fitted with satellite collars in 2009, three battery powered and two solar. Two of those birds are confirmed dead, one from coyotes and one from what we believe was severe emaciation. One bird fate is undetermined as the collar stopped working either from a malfunction or the bird dying and has not been recovered. One bird dropped its collar prior to migration out of the valley (this bird returned to the Blackfoot in 2010) and one bird showed us a migration out of the valley and then dropped its collar along its migration. This bird wintered in SW MT and returned to the Blackfoot in 2010.

### **2009 SIGHTINGS OF PREVIOUSLY RELEASED BIRDS:**

**2005 Released Birds:** Ten collared (Collar numbers 0P1–1P0) trumpeter swans were released on wetland site #23 (2004 Trumpeter Swan Habitat Suitability Study) on June 23, 2005. Eight of these birds were two-year-olds and two were yearlings. Three of these birds were reported as being found dead (0P4, 0P7 & 0P8). Five of these birds have not been seen since late fall of 2005. 0P5 was last seen on Wetland # 12 on August 8, 2006. 1P0 wintered the first year on Warm Springs Ponds approximately 60 miles south of the Blackfoot Watershed. 1P0 returned to the Blackfoot Valley in May of 2006 and spent about a month on a variety of wetlands. On June 14<sup>th</sup>, 2006 this bird was observed in the Mission Valley and has been observed repeatedly since that

time. This bird was observed numerous times in 2008 and appears to be paired with a bird from the Mission Valley but has yet to successfully nest. No observations of 1P0 or any other bird from 2005 have occurred since 2008.

**2006 Released Birds:** Seventeen collared (1P1-2P3, 2P5, 2P6, 2P7 & 3P0) one-year-old trumpeter swans were released on three separated wetlands (Sites 23, 19, & 26) on June 3<sup>rd</sup>, 2006. Six birds (1P1, 1P3, 1P4, 1P5, 1P6 & 2P1) are known to be dead. Four of these dead birds were diagnosed post mortem as having had severe intestinal parasitism and emaciation (1P1 & 1P4 from site #12 and 1P6 & 2P1 from site #23). 1P5 was found dead under a power line. The necropsy indicated that collision with the power line killed this bird. 1P3 was seen in the Blackfoot on Nevada Creek on 11-06-06 and then was not observed again until it was found dead on March 3, 2007 just outside of Dillon, MT. The lab report on cause of death for this bird has not yet been received. Six of the 2006 release birds have not been seen since they left the Blackfoot in the fall of 2006.

Five of the 2006 release birds (1P2, 2P3, 2P5, 2P7 & 3P0) were observed on American Falls Reservoir along the Snake River in Idaho on December 10, 2006. Based on numerous sightings of these birds in that area that winter, it appears that these birds left their wintering site in March or early April. 2P5 was re-observed on April 13, 2007 on Mud Lake in Idaho. On May 11, 2007, 2P3 & 2P5 arrived back in the Blackfoot Valley and were located on site#25. These two birds were spotted on numerous wetlands in the Valley as late as June 15, 2007 (site #23) when they were last seen in the Blackfoot.

On November 21, 2007 three birds (1P2, 2P3 & 2P5) were once again observed on American Falls Reservoir in Idaho. On February 20<sup>th</sup>, 2008 2P7 was observed with 2P3 on American Falls

Reservoir. No 2006 collared birds were confirmed in the Blackfoot during the spring, summer or fall of 2008.

On August 08, 2008, 2P7 was located with another collared bird (55R) captured at Harriman State Park as part of the Idaho translocation project. This bird (55R) was captured at Harriman and released at Harriman as a “control” cygnet. 55R is likely a Canadian-born cygnet and returned to its natal area during the summer of 2008. 2P7 and 55R are of breeding age and appeared to be pair bonded when observed near Longview, Alberta. On December 12, 2008 2P7 was observed at Pine Haven on the Henry’s Fork of the Snake River. 55R was also observed with 2P7 at that time.

There were no observations of birds in 2009 released in 2006.

**2007 Release Birds:** Ten collared (2P4, 2P8, 2P9, 3P1-3P7) yearling birds were released in the Blackfoot Valley on June 16<sup>th</sup>, 2007 on site #23. In addition four cygnets with leg bands (9P1-9P4) were released on site #29 on August 9<sup>th</sup>, 2007.

None of the yearling birds from the 2007 release were known to be dead as of December 31, 2008. However, all four cygnets are known to be dead. These four birds appear to have left the Blackfoot and headed east instead of south or west as have all other known birds. These birds ended up at Freezeout Lake Wildlife Management Area outside of Fairfield where one bird died in a collision with a power line and the other three were shot legally during the swan hunt at Freezeout.

One of the ten release birds on site #23 could not fly and so on November 6<sup>th</sup>, 2007 the bird (3P3) was recaptured and returned to the Wyoming Wetlands Society in Jackson. It appears this bird just simply did not molt in its flight feathers. The other nine birds stayed together in the valley and were last seen in the Blackfoot on

November 20th, 2007. On December 1, 2007 four birds (2P4, 2P9, 3P5 & 3P6) were observed on Oneida Reservoir in southeast Idaho along the Bear River. On December 19<sup>th</sup>, 2007, 2 birds (3P1 & 3P7) were observed on the Snake River at Blackfoot, Idaho.

On April 29, 2008, one 2007 collared bird (3P6) was located on the Clearwater River in the Blackfoot Valley. On May 6, 2008, 3P5 joined 3P6 and were spotted throughout the valley until July 5<sup>th</sup> when 3P6 returned to site #23 and began its molt. It is believed that 3P5 molted on Bandy Reservoir in the Blackfoot although this is not 100% certain. We believe two other collared birds returned to the Blackfoot in May of 2008 but collar numbers could not be read and the birds were not seen again. 3P6 was last observed on November 14<sup>th</sup>, 2008 on Elbow Lake along the Clearwater River in the Blackfoot. At that time, 3P6 was with two uncollared yearling birds that had spent the entire summer in the Blackfoot.

On July 23, 2008, 3P1 was observed alone on a wetland five miles west of Browning, MT on the east side of the Continental Divide. It stayed there until it was last seen there on October 3, 2008. On December 12, 2008, 3P1 was located at Pine Haven on the Henry's Fork of the Snake River.

On December 2, 2008, 2P9 was seen with twelve other uncollared white birds and one cygnet on Oneida Reservoir in Idaho. This is the same location where it was observed during the previous winter. We received no other reports of 2P9 in 2008 so where it spent the summer is unknown as of this report.

3P6 returned to the Blackfoot on May 6<sup>th</sup>, 2009 and spent the month of May on numerous wetlands and with several other returning birds. In June 3P6 molted on Bandy Reservoir with 6P8 and appeared to have developed a pair bond. 3P6 and 6P8 were last observed in the Blackfoot in October of 2009 and showed up at Warm Springs Ponds in MT on November 21, 2009.

**2008 Released Birds:** In 2008, an agreement between Wyoming Wetlands Society and the provinces of Alberta and British Columbia, authorized WWS to collect up to 60 eggs per year for a three-year period from active nests of wild trumpeters in select areas within the two provinces. As a result of this cooperative effort, 2008 was the first year that at least a portion of the Blackfoot release birds were of Canadian origin. A decision was made to release a portion of the birds earlier in the spring of 2008 in hopes that they would act as decoy birds to attract and keep previously released birds in the valley during the spring and summer. This strategy appeared to have some observable impact on both collared birds and uncollared wild birds. At least two of the previously released birds returned to the valley and molted (3P5 & 3P6). For the first time in 2008, four wild trumpeters spent the entire summer in the Blackfoot. Two of these four uncollared birds were frequently observed with 3P5 and 3P6.

A total of 43 birds were released in the Blackfoot Valley in 2008. On May 4<sup>th</sup>, 2008 five yearling trumpeter swans were released on Site # 12 (3P8 – 4P1 & one with only a USGS leg band). On May 5<sup>th</sup>, 2008 six yearling birds were released on Site #23 (4P2 – 4P7). On May 29<sup>th</sup>, 2008 an additional seven yearling trumpeters (4P8-5P4) were released on Site #23 joining the six that were released there in May.

On June 27<sup>th</sup>, 2008 seven yearling trumpeters (6P4, 6P5, 6P9, 7P2, 7P5, 7P7 & 7P8) were released on Site # 29. On June 28<sup>th</sup>, seven trumpeters (6P6, 6P8, 7P0, 7P1, 7P3, 7P4, & 7P6) were released on Site # 5. Six of these birds were yearlings. 6P6 (previously banded as 3P3) was a two-year-old that was released on Site #23 in 2007 and later returned to Jackson, Wyoming in November 2007.. On June 28<sup>th</sup>, 2008 eleven yearling birds (5P5 – 6P3, 6P7, & 7P9) were released on Site # 26.



As of December 31<sup>st</sup>, 2008, six of the 43 birds released in 2008 were known to be dead. Three birds (3P9, 4P0 & the uncollared metal leg banded bird) from Site #12 were known to be dead. One of these birds is believed to have died from a power line collision that probably occurred approximately two miles south of the release site. The other two known dead birds died from apparent severe intestinal parasitism and emaciation ( final lab results are pending). Three birds (4P7, 4P9 & 5P4) were found dead on Site #23. One was believed to have been killed by coyotes while the other two are believed to have died from intestinal parasitism and emaciation (pending final lab results).

Numerous sightings were reported of 2008 release birds throughout the fall in the Ovando and Lincoln areas of the Blackfoot Valley. Six of the seven birds released in the Lincoln area were last seen on November 15<sup>th</sup>, 2008 approximately 2 miles west of their release site. Reports of 24 red collared swans flying south in V formation in four separate groups were reported from November 24<sup>th</sup>, to November 29<sup>th</sup> in the Ovando area.

As of December 31<sup>st</sup>, 2008 two of the 2008 released birds were observed having left the Blackfoot Valley. 4P2 and 4P3 were observed on Warm Springs Ponds approximately 60 miles south of the Blackfoot Watershed in the same general area that 1P0 wintered in 2005/2006.

Eleven 2008 released birds (4P3, 5P5, 5P6, 5P7, 5P8, 5P9, 6P0, 6P2, 6P3, 6P8 and 7P9) now two year olds returned to the Blackfoot in 2009 as well as 3P6 a three year old released in 2007. Five of the birds (4P3, 5P7, 5P8, 6P0 and 6P2) molted on Mud Lake together and did not appear to have established pair bonds. 5P7 and 7P9 molted on Colburn Lake and appeared to have formed a pair bond and established a territory. 6P3 molted on Neudecker Lake with five birds released in 2009. 6P8 molted with 3P6 on Bandy Reservoir and appear to have established a pair bond and

territory. 5P5 and 5P6 were seen in the spring (May) but were not observed again in the Blackfoot.

The twelve birds that returned to the Blackfoot in 2009 appear to have left the valley by the end of October for migrations south. On December 16<sup>th</sup>, 2009 a trapper in the Ruby Valley of Montana flushed two birds (5P7 and 5P9) from Silver Springs a tributary to the Ruby River. Both birds struck a power line, leaving 5P9 dead and 5P7 crippled with a broken wing.

**2009 Released Birds:** 2009 was the second year that birds released in the Blackfoot Valley had origins from Canada (specific information is available with the Wyoming Wetlands Society). We expanded our educational outreach in 2009 and reached out to all 8 schools in the watershed reaching over 150 students through our Adopt-A-Swan Program ([Blackfootchallenge.org](http://Blackfootchallenge.org)). On May 6<sup>th</sup>, 8 birds were released on the Blackfoot Waterfowl Production Area by the 8 different schools with the teachers releasing the birds on behalf of their classes. With 12 birds back in the Valley from previous years, care was taken in releasing birds on wetlands that were not occupied by pairs. Two aerial flights were completed in the Blackfoot Valley in 2009, the first on May 27<sup>th</sup> and the second on July 30<sup>th</sup>.

A total of 29 one year old birds were released in the Blackfoot Valley in 2009. Eleven on Neudecker Lake with 6P3 a lone 2 year old on May 5<sup>th</sup>, 2009 (5) and May 28<sup>th</sup> (5) and one (9P8 satellite bird) on June 20<sup>th</sup>. Nine total birds were released on the Blackfoot WPA, Eight on May 6<sup>th</sup>, and one satellite collared bird on June 20<sup>th</sup>. Nine birds on Widgeon Marsh on June 20<sup>th</sup> three with satellite units.

### **Satellite Collars:**

Because of limited observations outside of the Blackfoot Valley and the need to better understand where birds were wintering and their migration routes 5 satellite collars were deployed in 2009. Based on literature reviews and talking with folks working with swan radio telemetry work, a decision was made to use collar mounted units. Extensive reviews of different companies led us to select North Star Science Technologies as the preferred company for purchasing the units.

We decided to go with three battery powered 80 gram units (9P8, 9P9 and 0P0) and two solar powered 24 gram units (9P6 & 9P7). Both units were set up to come on for 8 hours a day when operating to maximize download hits and to minimize battery use. The solar units were set up to come on 8 hours/day for 365 days a year as there were no battery life concerns. The 80 gram battery powered units have a working life of approximately 2,000 hours. The units allow you to program in 8 separate cycles to maximize hits and reduce battery use. The three units were set up to come on one day a week during molting, 3 times/week during early fall and winter, and every day during migration.

Working with Argos we decided to work off of the website to collect downloads and then transfer that data over to google earth and eventually into our GIS data base. This system worked well and was cost affective, however it required downloading the data atleast once every 10 days. Observation of satellite collared birds was collected every 2 weeks to confirm locations and status of birds.

All five satellite birds stayed on their release site wetlands and recording fine until 09-24-09. 9P8 on the BFWPA was located on an isolated wetland approx. ¼ mile from its release site. Inspection of bird found it in good shape and it flew off the wetland circled and landed back on the wetland. On 09-25-09, 9P7's solar unit was no longer transmitting. On 09-27-09, 9P6's solar unit was

also no longer transmitting. Ground observations on 09-29-09 and 10-04-09 located no birds on the last location of the units in question. It was presumed that the collars either fell off or the birds died and the solar units were no longer transmitting.

On October 8<sup>th</sup>, 2009, 9P9 was located on the Blackfoot Waterfowl Production Area without its satellite collar on. The bird looked healthy and was able to fly and feed with no problems. The collar was not located but presumed it cracked and fell off. 9P9 was last seen in 2009 on November 17<sup>th</sup> just north of Helmville, MT doing good.

On October 29<sup>th</sup>, 2009, Satellite bird 0P0 was found dead on the edge of a wetland it had been using for the last month or so. It was determined that the bird was killed by coyotes as it was loafing on the edge of the wetland. The collar was recovered.

9P8 began flying around the valley and transmitting signals on October 15<sup>th</sup>. The bird was seen multiple times with 9 other birds including 6P3 released in 2008 the remaining birds were released in 2009. On November 21<sup>st</sup>, 2009 9P8 showed up west of Helmville, MT and was reported with 4 other birds. On November 24<sup>th</sup> the bird had flown south and east over the Rocky Mountains and was transmitting at Lake Helena just north of the town of Helena. On the 28<sup>th</sup> 9P8 was spotted on Lake Helena and appeared to be doing well. By December 1<sup>st</sup> the transmitter was no longer working and the bird could not be found in that location.

Sometime between December 1<sup>st</sup> and December 31<sup>st</sup> 9P8 lost its collar and showed up on the Ruby River in SW Montana with 9 other Blackfoot birds.

Other observations of 2009 released birds. On June 6<sup>th</sup>, 2009, 8P9 disappeared on the BFWPA, presumed dead. On 09-10-09 0A2 was found dead on Wigeon Marsh, the bird appeared to be

emaciated and had been dead for awhile. On October 06-09 8P1 was found dead on the bank of Shoup Lake, it also appeared emaciated and was dead too long to send in for data. On October 16<sup>th</sup>, 2009 8P5 was found dead on the Blackfoot WPA and was sent in for lab results – still pending. On 10-28-09 0A4 was found dead from predation on the Foote property.

All of the other birds released in 2009 appeared to hang around the Blackfoot until all the water was iced over and last seen in the Blackfoot on November 21<sup>st</sup>, 2009.

Observation of 10 Blackfoot Birds was confirmed on 01-01-10 on Silver Springs Creek a tributary to the Ruby River in SW MT. Those birds were 5P7, 5P8, 5P9, 6P2, 6P3, 7P9, 8P3, 9P4, 9P8 and 1A2. 9P8 and 1A2 had both lost their collars but were still supporting leg bands.

### **2010 PROGRAM PLANS:**

We anticipate releasing another 30 trumpeter swans in the Blackfoot on previously identified priority sites. Most of the 2010 release birds will be yearlings that have not previously flown. A small portion of the 2010 releases may be cygnets. If this strategy is used, these cygnets will be released with previously released birds molting in the Blackfoot that have demonstrated an affinity to migrate to favorable wintering areas in the Snake River Valley in Idaho. Success in foster bonding these cygnets with molting adults from previous releases in the Blackfoot will result when the adult birds lead the cygnets in migration out of the Blackfoot Valley in the fall of 2010 and back into the valley the following spring.

The trumpeter release plan for 2010 includes some early releases in the Blackfoot so they will act as decoy birds as explained with the 2008 releases above. The remaining birds will be released between June and August 2010.

Wetland #12 has been the site of several trumpeter mortalities, apparently from parasite loading, followed by subsequent emaciation. This phenomenon was most apparent following the 2006 and 2008 releases. While we have not yet determined why this wetland seems to lend itself to intestinal parasite loading of release birds, to reduce the risk of possible recurrence of such losses, this site will be avoided for future releases.

Marking protocol for the 2010 releases will be the same as in previous years as stipulated in the plan. However, we are planning on once again retrofitting five-eight of the collars with Argos Satellite transmitters that would allow tracking the birds remotely in an attempt to better define migratory patterns, wintering areas, and molting locations. We had some problems with collars breaking on both satellite birds as well as regular collared birds. In discussions with Dale Becker with the Confederated Salish and Kootenai Tribes he expressed the same problem. To avoid this problem of satellite collars breaking and falling apart we will order 1/8" thick collars in 2010 instead of the 1/16" collars used in the past.

Ground and aerial surveys will be conducted throughout the Blackfoot Valley beginning once swans start frequenting the area in late March or early April. These surveys will continue through fall freeze-up. Aerials surveys will be conducted at least twice a year, once during spring migration to capture returned birds and once during molting to locate nesting or potential nesting sites and molting sites.

Funds for the 2010 program will be garnered from numerous private sources, the USFWS, MTFWP, the Blackfoot Challenge and its partners.